1. An apparatus for treating atrioventricular valve regurgitation, comprising:

a cutting instrument for severing at least one chord attaching an atrioventricular leaflet to a internal cardiac muscle; and

a positioning catheter through which the cutting instrument is positioned proximate the at least one chord, the catheter including an opening through which the cutting instrument severs the at least one chord.

2. The apparatus of claim 1, wherein the cutting instrument comprises a blade having a cutting edge diameter approximating the diameter of the at least one chord.

3. The apparatus of claim 1, wherein the cutting instrument comprises an optical fiber for delivering ablative laser energy.

4. The apparatus of claim 1, wherein the cutting instrument comprises a radiofrequency electrode.

5. The apparatus of claim 1, wherein the catheter has a curved end suitable to allow engagement of chords attached to a posterior leaflet.

6. The apparatus of claim 1, wherein the catheter includes a steerable tip.

7. The apparatus of claim 6, wherein the catheter further comprises coaxial steering wires for steering the catheter tip.

8. The apparatus of claim 1, wherein the cutting instrument is reversibly extendable through the opening, the opening being located at the end of the catheter proximate the at least one chord.

9. The apparatus of claim 1, wherein the opening comprises a notch in the catheter having a cross-sectional notch area greater than the cross-sectional area of the at least one chord.

10. The apparatus of claim 9, wherein the notch includes at least one protruding edge defining a portion of the notch for limiting motion of the at least one chord when positioned within the notch.

11. The apparatus of claim 1, wherein the cutting instrument further comprises a means for grasping the at least one chord.

12. The apparatus of claim 11, wherein the means comprises a wire having a deformed end for partially encompassing the at least one chord.

13. The apparatus of claim 12, wherein the wire is composed of a shape memory material that deforms at or near body temperature.

14. The apparatus of claim 11, wherein the grasping means is reversibly extendable through the opening, the opening being located at the end of the catheter proximate the at least one chord, so as to retract a grasped chord toward the opening.

15. The apparatus of claim 1, further comprising a pair of operable jaws disposed at the end of the positioning catheter proximate the at least one chord for grasping the at least one chord.

16. The apparatus of claim 1, further comprising a pair of pivoting pincers disposed at the end of the positioning catheter proximate the at least one chord for pinioning the at least one chord in a closed position.

17. The apparatus of claim 1, further comprising an introducer catheter for advancing the positioning catheter toward the at least one chord.

18. The apparatus of claim 17, wherein the introducer catheter further comprises a directing arm through which the positioning catheter is maneuvered to the position proximate the at least one chord.

19. The apparatus of claim 17, wherein the introducer catheter further comprises a means for temporarily stabilizing the position of the introducer catheter within the LV.

20. The apparatus of claim 19, wherein the stabilization means comprises:

one or more contact elements reversibly extendable from the introducer catheter so as to contact an internal surface of the heart cavity at one or more points.

21. The apparatus of claim 20, wherein the contact element is composed of a shape memory elastic material that assumes the shape desired upon extension from the introducer catheter.

22. The apparatus of claim 17, further comprising an ultrasound transducer for imaging a region proximate the at least one chord located on the introducer catheter.

23. The apparatus of claim 17,

wherein the positioning catheter protrudes from within the introducer catheter through an opening in the introducer catheter; and

further comprising a plurality of positioning wires similarly disposed within and protruding from the introducer catheter, the positioning wires attached to the

positioning catheter so as to enable steering of the end of the positioning catheter by selectively tensioning on one or more of the wires.

24. The apparatus of claim 17, wherein the introducer catheter further comprises an imaging device oriented so as to image a region near the mitral valve including the at least one chord

25. The apparatus of claim 24, wherein the imaging device is comprised of a imager selected from the group consisting of: a two-dimensional matrix array of piezoelectric crystals, a linear phased array and means for rotating the array within the catheter so as to produce a three-dimensional image, a magnetic resonance coil, and fiber optics for transmitting and receiving near infrared energy.

26. Method of treating atrioventricular valve regurgitation related to restricted leaflet closure by leaflet tethering, comprising the step of:

percutaneously severing at least one chord attaching an atrioventricular leaflet to an internal cardiac muscle.

27. The method of claim 26, further comprising step of:

grasping the at least one chord prior to severing.

28. The method of claim 26, wherein the at least one chord is a basal chord.

29. The method of claim 26, wherein the at least one chord comprises two chords, wherein a first one of the chords attaches to an anterior leaflet, and a second one of the chords attaches to a posterior leaflet.

30. The method of claim 26, wherein the at least one chord comprises a pair of chords.

31. The method of claim 30, wherein the pair of chords comprises two chords of an anterior leaflet closest to the central axis of the ventricle.

32. The method of claim 26, further comprising the step of:

positioning a cutting device proximate the at least one chord via a catheter.

33. The method of claim 32, wherein the positioning step includes advancing the cutting device via a pathway selected from the group consisting of: retrograde via the aterial system into the left ventricle, through the venous system and right atrium into the left atrium across the atrial septum, directly through a wall of the heart, and percutaneously through a small incision in the chest wall and pericardium.

34. The method of claim 32, wherein the advancing step is assisted through the percutaneous use of robotic tools.

35. The method of claim 26, further comprising steps of:

imaging a cardiac region including the at least one chord prior to and during the severing process.

36. The method of claim 35, wherein the imaging comprises transducing ultrasound energy to the region.

37. The method of claim 36, wherein the ultrasound energy is transduced from the chest surface, esophagus, or within the heart.

38. The method of claim 37, wherein the ultrasound energy transduced from within the heart is provided by an ultrasound transducer positioned proximate the at least one chord.

39. The method of claim 35, wherein the imaging comprises optically imaging the region through one or more optical fibers.

40. The method of claim 35, wherein an ultrasound transducer is similarly positioned proximate the at least one chord.

41. An apparatus for treating atrioventricular valve regurgitation, comprising:

an instrument for elongating at least one chord attaching an atrioventricular leaflet to a internal cardiac muscle; and

a means for delivering the instrument proximate the at least one chord.

42. The apparatus of claim 41, wherein the instrument further comprises:

two nodes;

at least one length of artificial chordal material connecting the two nodes;

means for affixing each node at a respective predetermined position along the at least one chord; and

means for severing a segment of the at least one chord between the two affixed nodes.

43. The apparatus of claim 41, further comprising means for adjusting the at least one length of artificial chordal material.

44. The apparatus of claim 42, wherein the means for severing comprises a means selected from the group consisting of radiofrequency electrode(s), blades, or optical fibers delivering ablative laser energy.

45. The apparatus of claim 42, wherein each node comprises:

a first mateable part and a second mateable part, each part having a recess for receiving a portion of the at least one chord;

wherein the means for affixing each node comprises a mechanism for attaching the first mateable part to the second mateable part selected from the group consisting of an adhesive applied to surfaces of the mateable parts, a plurality of connecting pegs and holes disposed at corresponding locations on the mateable parts, and a heating element to anneal together the mateable parts.

46. The apparatus of claim 41, wherein:

the instrument further comprises two nodes, each node comprised of two mateable parts each having a recess for receiving a portion of the at least one chord, at least one predetermined length of artificial chordal material connecting the two nodes, means for affixing each node at a respective predetermined position along the at least one chord, and means for severing a segment of the at least one chord between the two affixed nodes, and wherein each node; and

the delivering means comprises:

two jaws, each jaw housing a corresponding one of the two mateable parts of each node and at least one of the jaws housing the at least one predetermined length of artificial chordal material,

a controllable hinge mechanism from which the two jaws pivot, and

a catheter through which the jaws, controllable hinge mechanism and instrument are advanced to a position proximate the at least one chord.

47. A method for treating atrioventricular valve regurgitation related to restricted leaflet closure by leaflet tethering, comprising the steps of:

elongating at least one chord attaching an atrioventricular valve leaflet to an internal cardiac muscle.

48. The method of claim 47, wherein the elongating step further comprises the steps of:

delivering two nodes to position proximate the least one chord, the nodes being connected to each other by a length of artificial chordal material;

securing the two nodes to the at least one chord; and

severing the at least one chord at a position between the two nodes.

49. The method of claim 48, further comprising the step of adjusting the length of artificial chordal material.

50. The method of claim 48, wherein the severing step further comprises applying radiofrequency energy to the at least one chord between the two nodes.

51. The method of claim 48, wherein the step of securing each node further comprises the steps of:

enclosing a portion of the at least one chord between a first mateable part and a second mateable part of each node; and

adhering the first part to the second part of each node.

52. The method of claim 51, wherein the adhering step comprises applying heat to anneal the surfaces of the mateable parts of each node.

53. The method of claim 51, wherein the adhering step comprises curing an adhesive applied to the surfaces of the mateable parts of each node.

54. The method of claim 51, wherein the adhering step comprises pressing the two mateable parts of each node together so as to interconnect pegs and holes at corresponding locations on each surface of the mateable parts.

55. The method of claim 47, wherein the delivering step further comprises the steps of:

advancing a hinged housing containing the two nodes through an introducer catheter by an approach selected from the list consisting of: retrograde via the aterial system into the left ventricle, through the venous system and right atrium into the left atrium across the atrial septum, directly through a wall of the heart, and percutaneously through a small incision in the chest wall and pericardium.